

# **Final Report**

# Strategic Regional Arterial

US Route 41
IL Route 120 North to I-94

OPERATION GREENLIGHT
Illinois Department of Transportation

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#### **Executive Summary**

Since the early 1970s, development patterns have reflected a significant migration of people and employment from the City of Chicago to the surrounding suburbs. Though the region's population grew by only 4% during the 20-year period from 1970 to 1990, the region's urbanized area increased by approximately 70%. This new development created dramatically different travel patterns. While the principal transportation systems were designed to efficiently handle traditional suburb-to-city commuting patterns, significant growth occurred in suburb-to-suburb travel. These new travel demands overwhelmed the capacity of many of the region's expressways and arterial streets, causing traffic to spill over into adjacent neighborhoods as drivers have attempted to avoid congestion. Despite significant investments in transportation system improvements over the last two decades, traffic congestion in the Chicago region has increased steadily.

Regional population and employment forecasts suggest that even more difficult challenges lie ahead. The Northeastern Illinois Planning Commission (NIPC) has estimated that the region's population will increase by as much as 24% between 1990 and 2020; this is four times the growth rate experienced between 1970 and 1990. Employment in the region is expected to increase by as much as 37% over the same period. Though growth will continue in outlying suburban areas, significant infill growth is expected to occur in the City of Chicago and inner-ring suburbs as well. If the region's economic vitality and quality of life are to be preserved in the face of this expansion, significant improvements to transportation mobility must be achieved.

Transportation planning agencies have recognized that needed mobility improvements cannot be achieved solely through expansion of the region's expressway system. Thus, they are planning the creation of the Strategic Regional Arterial (SRA) system which is a comprehensive network of 1,390 miles of existing arterial highways in Northeastern Illinois. The SRA system is intended to supplement existing and proposed expressway facilities in accommodating long-distance, high volume automobile and commercial vehicle traffic. In order to meet the objectives of the SRA system, it will be necessary to transform the historic context of these arterial highways to one which emphasizes traffic mobility while still accommodating land access needs.

This report summarizes a planning study conducted for one of the routes on the SRA system: U.S. Route 41. This corridor follows U.S. Route 41 from IL Route 120 in Park City north to its terminus at Interstate Route 94 in the Village of Wadsworth. The study developed a conceptual improvement plan which, when implemented, will significantly improve transportation mobility along the corridor. The study is considered a "pre-Phase I" study, since it may be a number of years before the SRA improvements can be realized. Before constructing these improvements, detailed Phase I engineering and environmental studies as well as Phase II design activities must still be completed. The concept plan is primarily intended to serve as a guide for land use and access decisions that will be made along the route between now and when an SRA improvement could actually be constructed. It is hoped that the long-range SRA plan for this route will be used by local agencies in their land use planning activities. Only with the support of the communities through which U.S. Route 41 passes, can the ultimate improvement plan be realized.

U.S. Route 41 is designated as a suburban SRA corridor. The typical cross section for this designation is a six-lane roadway with a 30 foot median to allow for dual left-turn lanes at major

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signalized intersections. The current roadway is a combination four-lane expressway with grade separated interchanges and a limited access highway with a 28 foot median. It was determined that the four-lane cross section that currently exists is not significantly different from a six-lane arterial in terms of capacity and operating performance. For this reason, much of the existing roadway was kept the same.

The U.S. Route 41 SRA corridor was divided into five segments for the purposes of this study. Following is a summary of the major improvement recommendations within each segment.

#### Segment 1: U.S. Route 41 - IL Route 120 to Ferndale Street

- Upgrade U.S. Route 41/IL Route 132 grade separated interchange (as per IDOT Location and Design Report U.S. Route 41, November, 1990).
- Implement jersey barrier median to facilitate access control and enhance safety.

#### Segment 2: U.S. Route 41 - Ferndale Street to the Des Plaines River Crossing

- Add dual left-turn lanes on both legs at the U.S. Route 41/Delany Road intersection.
- Consolidate commercial access drives east of Delany Road intersection.
- Implement access management in strategic locations with the use of cul-de-sacs and right in/right out restrictions on cross streets.

#### Segment 3: U.S. Route 41 - Des Plaines River Crossing to Wadsworth Road

- Align the U.S. Route 41/IL Route 21 intersection to form a signalized "tee" intersection.
- Install jersey barrier median through entire segment.
- Signalize the intersection of U.S. Route 41 and Hansson Road.
- Consolidate commercial access at U.S. Route 41/Wadsworth Road intersection.

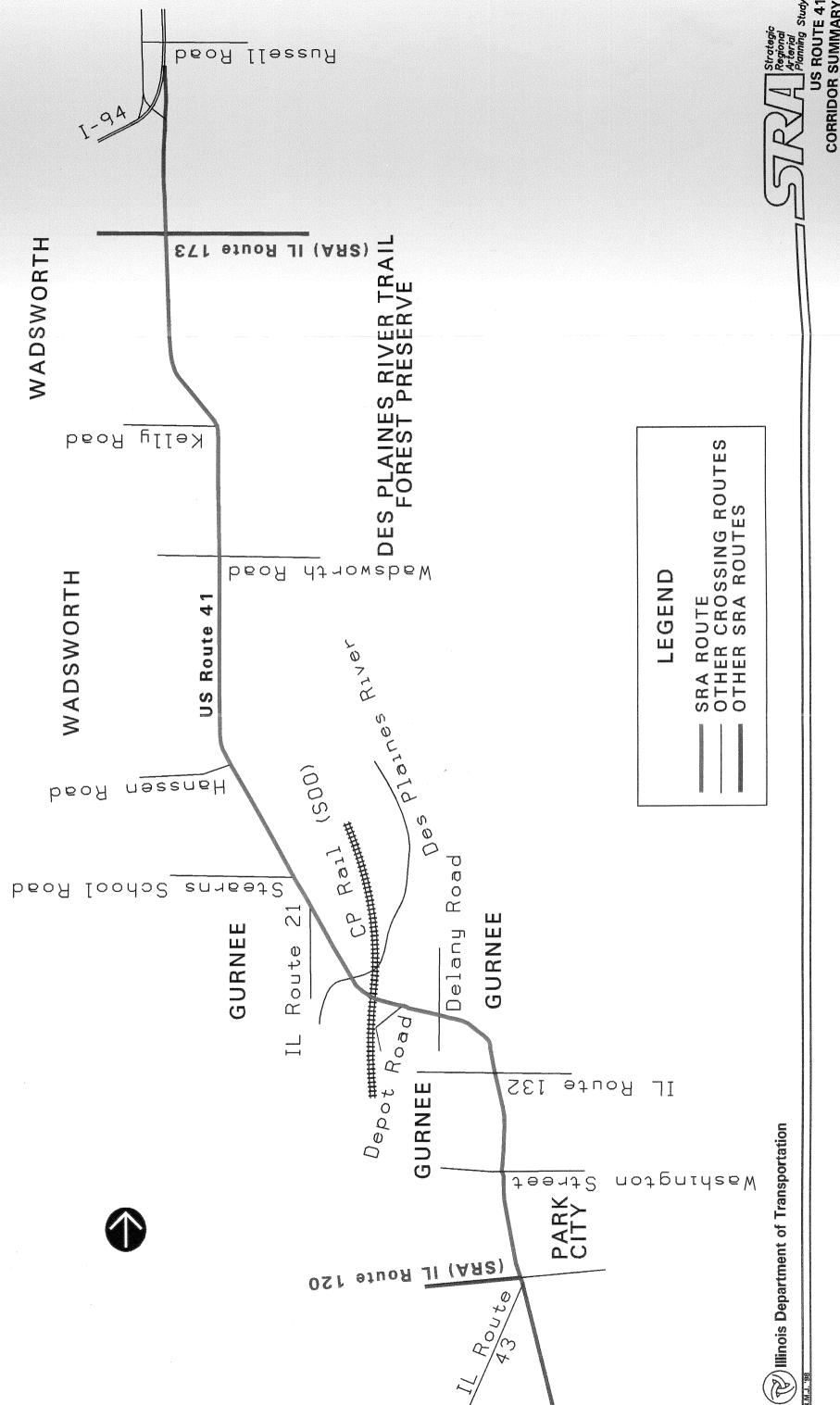
#### Segment 4: U.S. Route 41 - Wadsworth Road to Rosecrans Road (IL Route 173)

- Roadway improved to SRA specifications in 1996.
- Grade separate equestrian crossing at Kelly Road.

#### Segment 5: U.S. Route 41 - Rosecrans Road (IL Route 173) to Russell Road

- Consolidate commercial access at or near U.S. Route 41/IL Route 173 intersection.
- Maintain left-turn lanes for truck weigh station and forest preserve service drive.
- Modify northbound Russell Road exit ramp using existing stubbed frontage road.

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